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| Bogachev et al. (11)                       | n=32     | NMES (Veinoplus®) applied to the posterior surface of the lower leg along calf muscles. | Frequency: 20–30 Hz  
Wave form: Not stated  
Treatment duration: 20 min  
Times per day: 1–10 days = 3  
11–20 days = 2  
21–30 days = 1 | NA                  | Circumference of the supramalleolar shin segment with a tape measure | Total or partial reduction of evening oedema was shown in 93.8% of limbs, the circumference of the lower leg diminished by 20.3 mm (p<0.001), pain reduced and quality of life improved. |
| Non-randomized clinical trial              | 18 female 12 male 45.2 years |                                         |                                                                                       |                    |                                   |                                                                                                  |
| Chronic venous oedema                      | Faghri (17) |                                         |                                                                                       |                    |                                   |                                                                                                  |
| Ravikumar et al. (12)                      | n=22     | NMES (Revitive IX) to the nerves and muscles of the foot. | Intensity: 1–99 units, maximum current of 13 mA  
Sham group rms at 500 Ω resistance  
Wave form: Not stated  
Treatment duration: 30 min daily for 6 weeks  
Times per day: Once |                    | Oedema (Perometer) | Quality of life |                                                                                                  |
| RCT                                         | 15 female 7 male 62 years |                                         |                                                                                       |                    |                                   | Limb volume increased in the sham group, but was prevented in the NMES group. NMES may prevent orthostatic limb oedema with NMES. |
| Chronic venous disease                     | Man et al. (14) |                                         |                                                                                       |                    |                                   |                                                                                                  |
| Wou et al. (13)                            | n=10     | 2 NMES devices (Geko and Revitive IX). The Geko was applied to the calf muscle pumps and the Revitive IX applied to nerves and muscles of the foot. | Geko:  
Frequency: 1 Hz  
Wave form: 70–560 μs  
Wave form: Treatment: Transcutaneous  
4 hours duration | Grade 2 graduated compression stockings | Oedema (Perometer) | All devices well-tolerated and reduced leg swelling; however, stockings were the only significant reduction. |
| Non-randomized pilot clinical trial        | 4 female 6 male 29.9 years |                                         |                                                                                       |                    |                                   |                                                                                                  |
| Leg swelling                               | Man et al. (15) |                                         |                                                                                       |                    |                                   |                                                                                                  |
| Man et al. (14)                            | n=20     | Standing with NMES (HEALTHFIT) applied to lower leg muscles. | Frequency: 45–125 Hz  
Wave pulse: Mean = 80 Hz  
Wave form: Rectangular waveform  
Treatment duration: 30 min  
Times per day: Once | 30 min of standing | Foot and ankle volume  
(Plexiglas ankle volumeter) | Mean volume changes from pre- to post-test with NMES and without were significantly different. |
| Non-randomized clinical trial              | 14 male 6 female 28.9 years |                                         |                                                                                       |                    |                                   |                                                                                                  |
| Healthy patients                           | RCT      |NMES or Sub motor ES (HEALTHFIT) applied to the lower leg muscles. | Frequency: Mean = 80 Hz  
Wave pulse: 60–240 μs  
Wave form: Rectangular waveform  
Treatment duration: 30 min  
Times per day: Once | Placebo group | Volumetric Displacement | There was no significant difference for volume or function. Ankle girth was significantly different from session 1 to 3, but this may be compromised. NMES is not effective in the early period after ankle sprain. |
| Ankle sprain                               | n=34     |                                         |                                                                                       |                    |                                   |                                                                                                  |
| Devrimsel et al. (16)                      | n=60     | Cefar device for NMES on the flexor and extensor muscle groups of the hand. | Frequency: 30 Hz  
Wave pulse: 300 ms  
Wave form: Symmetrical biphasic  
Treatment duration: 20 min  
Times per day: 5 times per week for 3 weeks | Whirlpool bath | Hand volumetric device  
Pain (VAS)  
ROM  
Fingertip-to-distal palmar crease distance, hand grip strength and pinch strength | Significantly statistical improvements were observed in all parameters in both groups, Hand oedema decreased post-treatment of NMES. |
| RCT                                         | 11 female 23 male 30.2 years |                                         |                                                                                       |                    |                                   |                                                                                                  |
| Complex regional pain syndrome             | n=60     |                                         |                                                                                       |                    |                                   |                                                                                                  |
| Faghri (17)                                | n=8      | NMES (Medtronic) applied to the forearm. | Frequency: 35 Hz  
Wave pulse: Not stated  
Wave form: Not stated  
Treatment duration: 30 min  
Times per day: Once | Limb elevation | Volumetric Measurement  
(hand and arm)  
Lower and upper arm girth | NMES was more effective for reduction of hand oedema than limb elevation alone. |
| Non-randomized clinical trial              | 65 years |                                         |                                                                                       |                    |                                   |                                                                                                  |
| Cerebrovascular accident                   |                     |                                                                                 |                                                                                       |                    |                                   |                                                                                                  |

RCT: randomized clinical trial; ES: electrical stimulation; NMES: neuromuscular electrical stimulation; VAS: visual analogue score; QOL: quality of life CIVIQ: Chronic Venous Insufficiency Quality of Life Questionnaire.